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September 2020

ARMY COMMUNICATOR

Cloud-Based Communication

Plus:

- ***RETRANS certification***
- ***ESB-E***
- ***Signal History***

FROM THE CIVIL WAR TO WINNING IN THE ERA OF GREAT POWER COMPETITION
U.S. ARMY SIGNAL CORPS
1860 - 2020
160 YEARS OF EXCELLENCE

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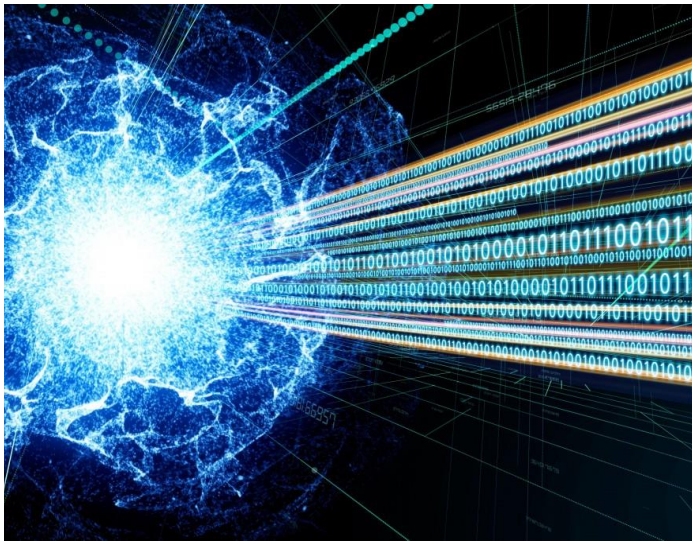
On the Cover

Cloud-based communication and Big Data are more important than ever in the COVID-19 environment. To meet this challenge the Signal Regiment is continually growing and adapting with new techniques and methodologies for getting the message through.
US Army graphic



Signal Regimental Team

COL John T. Batson
Acting Signal School
Commandant

Welcome to the September issue of the Army Communicator. The fall editions are usually when we discuss TechNet, which is an annual Augusta tradition that the Signal Corps participates in every year. Unfortunately, due to the ongoing pandemic, TechNet has been postponed to January 2021. However, when that time comes, we look forward to bringing you the latest and greatest innovation-based news from the event.

As we, the Signal Corps, continue to adapt and evolve in today's ever-changing environment, we have redefined how we communicate at home and abroad. Ensuring mission success for our forces across the world, while prioritizing new and unique health and safety standards and requirements has truly been to our benefit as we've employed technologically-creative approaches that have widened the aperture with which we view and employ the Signal Corps.

In this issue, we'll take a look at the new normal in which we find ourselves planning, interacting, and operating in. From training and operating in a COVID-19 environment to cloud based data applications and beyond, we're showing how Signal is helping the Army adjust to an ever-changing world. Additionally, in response to the many reader requests, this month's edition includes an update on the Expeditionary Signal Battalion-Enhanced directly from the commander of 50th ESB-E.

CSM Darien D. Lawshea
Regimental CSM

Remember, the Army Communicator is the Voice of the Signal Regiment. We will always publish information you need to know, but we're also interested in articles you want to read. So if you have ideas or suggestions, let us know on social media (www.facebook.com/UsArmySignalRegiment/ or www.twitter.com/signal_school) or email the editor directly.

Thank you again for all you do. Now more than ever, Signal is crucial to the continued success of the force. Without Signal, the message won't get through.

Until next time,

Pro Patria Vigilans!

CW5 Garth R. Hahn
Regimental CWO

A practical approach to RETRANS certification

Cpt. Alex Bridgeforth
Tactical Signal Trainer

Somewhere in Atropia, a battalion S6 tasks the Battalion's Retransmission (RETRANS) Crew to establish atop the hills of Porta-Potty Wadi. Prior to departure, the crew fails to conduct an analog or digital map reconnaissance of their route and drives to the wrong location. They take over an hour to erect a single OE-254 antenna, a task that TM 11-5985-357-13 states should take one person 15 minutes to setup. After establishing two antennas, the Team Chief messages the Main Command Post (MCP) that they are only able to retransmit one net on OE-254s, because they failed to pack six antennas. They are unaware that they are in the wrong position due to lack of operational knowledge of their Defense Advance GPS Receiver (DAGR) and Joint Battle Command-Platform (JBC-P). Furthermore, the battalion's Very High Frequency (VHF) network begins to fail as the task force extends. As the sun sets, the Team Chief realizes their crew will need to use night vision devices (NVD) to move to their correct location, a task in which they are not proficient. Due to the lack of training and equipment proficiency, the Team Chief chooses not to risk moving until sunrise without an escort. At night, the enemy identifies their site due to sky-lined vehicles and antennas. Additionally, all members of the crew are asleep, not out on security or observing through optics. Just before the battalion is set to attack, an enemy BMP-3 destroys the vehicle and crew. Lack of communications between the battalion's MCP, Tactical Command Post, and forward elements contributes to a failed battalion attack.

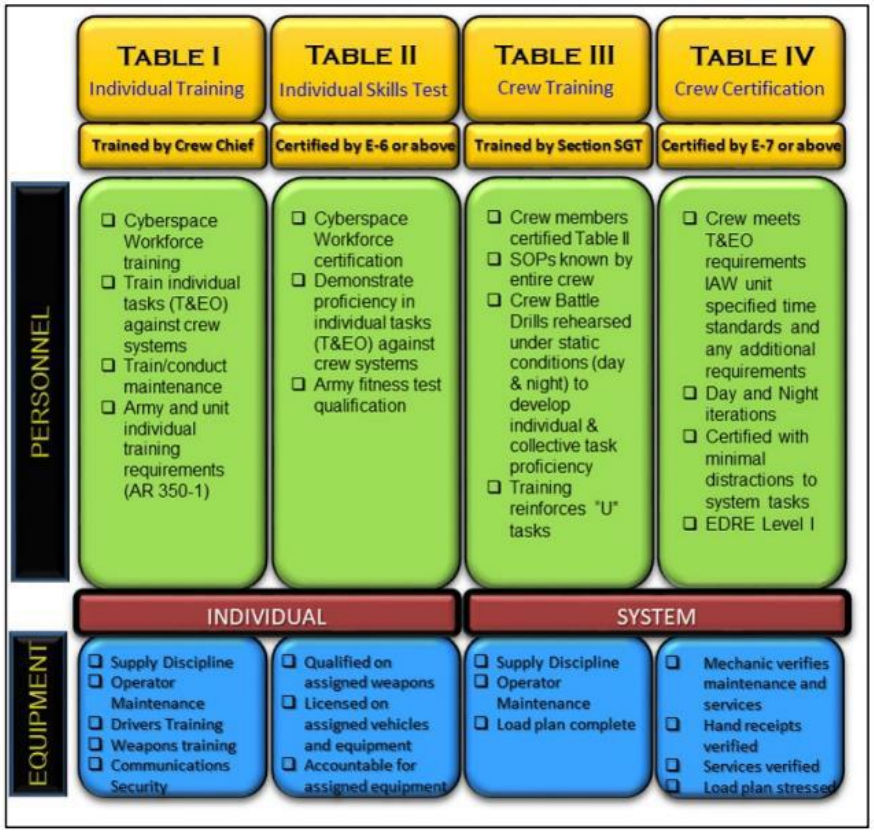
RETRANS Crews are critical to communications and enabling Task Force Commanders' command and control (C2). They are solely responsible with the mission of extending a unit's line-of-sight VHF network. RETRANS Crews regularly deploy to the National Training Center (NTC) not proficient in basic Soldier field craft and MOS specific tasks. NTC Signal OC/Ts consistently identify RETRANs planning and execution as critical points of failure of the C2 War-fighting Function (WfF), contributing to lack of shared understanding and severe communications degradation across the BN and BCT.

BCTs are required to execute RETRANS crew certification according to the Signal Assessment Tables in TC 6-02.1 (The US Army Signal Corps 2019 Training Strategy) using T&EO 11-CW-7017 (Conduct Combat Network Radio [CNR] RETRANS Operations). They should consider using three key events as the RETRANs train-up to NTC. To mitigate the previously exemplified failures,

Example of a reverse slope RETRANs site.
Photo by Master Sgt. Everardo Perez

these events include a layout of all equipment to identify and order shortages, setup of all the BCT's RETRANS Crews side-by-side, and a RETRANS FTX to verify equipment functionality and crew proficiency from short and long distances.

Equipment layout is a BCT "signal team" event that should be led by the BCT S6 section and supported by the Signal Company and all subordinate S6 sections. The layout includes items identified in both ATP 6-02.53 (Techniques for Tactical Radio Operations), Paragraph 3-47 and GTA 11-02-001 (RETRANS Mission Checklist). Critical items in the layout are the six to eight OE- 254s and COM-201s. Shortages identified at this layout should be ordered the same day to prepare for the future BCT RETRANS setup event. Spares that are listed as equipment COEI or BII are consistently not on hand or not on order during inventories observed at NTC.



Signal Assessment Tables
Graphic provided by Cpt. Alex Bridgeforth

The primary purpose of the RETRANS setup event is establishing a common standard for all BCT RETRANS Crews. It is a simple exercise where every RETRANS crew in the BCT establishes all RETRANS sites side-by-side in a designated centralized area. After setup is complete, all crews evaluate each site noting recommendations and best practices, creating a common understanding of minimum requirements across the BCT.

The RETRANs FTX should be a 48-hour FTX that focuses on the tactical basics that many crews fail at during a NTC rotation. FM 6-02 (Signal Support to Operations), paragraph 4-15 lists planning factors and events that crews should train on at the RETRANS FTX. These include jumping sites multiple times per day, day/night mounted land navigation, site selection, generator operations and maintenance, and leveraging subject matter experts to train site security procedures. Crews should conduct full site establishment with all six antennas and camouflage. Jumping sites should occur both day and night to get repetitions of driving and site establishment with NVDs under low-visibility conditions.

RETRANs crews are consistently a critical point of friction, undermining mission success and contributing to critical communications degradation at NTC. Task Force Commanders, XOs and S6s must develop training for signal Soldiers like Infantry and Armor squads and platoons. With a strong foundation of crew training, these Soldiers will provide the much-needed communications capability that commanders require. Moreover, common RETRANs level of proficiency enables the BCT to employ the C2 architecture required to fight and win on the distributed battlefield.

Training and Operating in a COVID-19 environment

Maj. Woo C. “David” Shin, Cpt. Justin White, and
Cpt. Etta S. Buss
Lizard 35, NTC Operations Group and
Goldminer 24, Brigade Support Medical Company

As defined by FORSCOM, the Novel Coronavirus (COVID-19) is a viral threat with “global reach” spread through “human to human contact via airborne transmission through respiratory droplets from infected individuals or…through contact with contaminated objects” that has resulted in “numerous fatalities.” 0F1 The Brigade Combat Team’s (BCT) organic Health Service Support (HSS) capabilities are not appropriately equipped to test individuals for COVID-19, as there is no test currently supported by the MTOE laboratory equipment in the Brigade Support Medical Company (BSMC). However, that does not leave the BCT helpless in protecting its personnel and mitigating COVID exposure throughout its formations. It is critical that BCTs and the Army understand how to mitigate COVID risk while continuing to operate effectively in garrison and during field training.

Soldiers are taking precautions against COVID-19 in training and forward operating environments.
US Army photo

COVID-19 prevention and mitigation starts at the individual level. The Centers for Disease Control and Prevention (CDC) outlines the best prevention measures each person can take in an effort to protect themselves and those around them. First line leadership at every level needs to ensure their personnel are washing their hands often with soap and water, covering coughs and sneezes, maintaining six feet of physical distance whenever possible, wearing a cloth face covering whenever physical distancing is not practical, and disinfecting frequently touched surfaces at least once daily. Personnel who self-identify with COVID-like symptoms or who believe they may have been exposed to COVID-19 should follow their post/unit’s medical guidance, whether that is in agreement with the CDC and directs them to stay home or instructs them to call the Nurse Advice Line for further medical evaluation.

In garrison, a battalion’s medical provider can lean on their line medics to assist in creating a culture of mitigation across the formation. The relationship between the line medics and their companies can facilitate conversations about exposure prevention; therefore, it is critical that the Physician’s Assistant and/or Battalion Surgeon provide guidance and continuing education to the unit’s medics as they receive updates to the scientific knowledge regarding the virus and best practices for

COVID-19 mitigation. Providers need to remain current with CDC and Army recommendations to best advise leadership across their battalions. Additionally, battalion medical leadership needs to remain linked in with both the Brigade Surgeon Section and the BSMC, specifically Preventive Medicine (PM), to ensure understanding of changes to requirements, mitigation measures, and support to unit readiness while still protecting the force, i.e. individual screening and/or temperature checks.

The BCT's main medical node, the BSMC, does not have any additional organic capability with regard to COVID-19 as compared to the Role 1s. However, the BSMC has additional medical personnel available to surge in support of any identified requirements. Additionally, COVID-19 mitigation and medical response provide another opportunity for the company to execute its doctrinal mission of Army Health System support to the BCT. In addition to its normal support to the garrison Soldier Centered Medical Home, the BSMC should consider focusing on the following areas. First, the BSMC can apply their additional manpower and expertise to conduct COVID-19 test sampling for BCT personnel, if testing is required for CTC participation or in keeping with the FORSCOM business rules for a COVID-19 positive Soldier. Second, the Brigade Medical Supply Office should work to procure the required Class VIII allowing for screening/temperature checking within battalions and the personal protective equipment required for the medical community to continue operating under COVID-19 considerations. Third, PM support must be provisioned to the BCT and subordinate battalions while enhancing coordination with the BCT and Division Surgeon Sections.

Soldiers are taking precautions against COVID-19 in training and forward operating environments. Photo by Staff Sgt. Shawn Morris

The PM section in the BCT's BSMC must provide daily BCT-internal Disease Non-Battle Injury (DNBI) reports to the Brigade and Division Surgeon Sections in order to support medical surveillance and epidemiology consultation, with the ultimate goal of catching any COVID outbreak early enough to slow and stop its spread. Ideally, before any positive cases of COVID-19 are identified within a BCT population, PM should be proactively engaged in the planning and preparation for BCT response. These key tasks are establishing and training BCT-internal

Clean and Trace Teams, assessing work spaces and redefining maximum personnel limits IAW physical distancing requirements and/or enforcing the wear of masks, and providing additional hygiene training to units or in support of food service operations.

It is important to note that screening and temperature checks do not need to be executed by medical personnel. Once the Brigade Medical Supply Office procures and distributes COVID screening and temperature check equipment, unit leadership must maximize mitigation efforts and conserve medical capability and capacity by training non-medical personnel to conduct these tasks.

Operationalizing COVID-19 mitigation to be effective in the field during training depends on the base of knowledge and cultural shift established within the unit while in garrison. Units should endeavor to continue all preventative, surveillance, and response actions that they execute in garrison, albeit in modified form. The first step prior to conducting training is to bring as "COVID-free" a population as possible out to the field. IAW current FORSCOM guidance, 100% testing of Soldiers is only required for CTC participation and is "strongly discouraged" for participation in home station training in order to conserve testing resources and capabilities. In order to comply with FORSCOM guidance but still mitigate risk, units should seek to screen and temperature check 100% of personnel prior to field training. Additionally, dispersed field training at the company level or below can be used to effectively quarantine BCT populations prior to larger unit exercise. For example, if a 14-day dispersed company STX training window immediately precedes battalion and BCT-level training, then any COVID impacts can be identified, isolated at lower levels, and thus mitigated before large-scale multi-echelon training begins. Quarantine prior to home station training may not be practical as the incubation period for COVID-19 is up to fourteen days; however, if screening and/or quarantine are effectively implemented, it is likely that the field may be the most COVID-safe environment the unit can be in.

Simple precautions, such as masks in workspaces, allow Soldiers to continue operational duties. Photo (Master Sgt. Matt Hecht

Screening must continue while in training. This ties back to the garrison discussion above. If the unit's culture and norms have shifted in garrison whereby temperature checks, screening questions, masks, and social distancing are expected at all times, the unit will transition to the field with ease. The training of non-medical personnel to conduct temperature checks and screening ensures that the capabilities, responsibilities, and authorities to conduct screening are distributed and easier to maintain in a training environment. For example, if every Platoon Sergeant is given the tools (thermometer, laminated screening questions card) to conduct his own screening for his platoon, the onus is placed on unit leadership to protect the force, rather than remaining in purely medical channels. Units should consider the frequency of screening and whether the concept of "safety bubbles" can be applied to the specific training environment. A once-daily temperature check and screening for any Soldiers, designed to identify anyone exhibiting shortness

of breath or elevated temperature, and the same checks whenever a person enters a different "safety bubble" can assist with early detection of COVID and keep units safe.

Units must create plans that address the possibility of a symptomatic or COVID-positive Soldier. Clean and Trace Teams must be identified, trained, and placed on standby to perform their mission. Additionally, medical leaders should identify the SOPs they will use to protect medical personnel and sanitize their equipment in the event they have to transport a potentially-exposed Soldier back to a testing location. If proper training is conducted, anyone, not just medical personnel, can transport a potentially exposed, asymptomatic individual, which conserves medical capability and capacity. Once tested positive for COVID-19 or otherwise symptomatic, the unit and its leaders must have plans for quarantine or isolation, to include life support assistance for those who are placed in such a status. Units should find that they merely have to understand and implement current higher headquarters, garrison, and medical treatment facility policies, guidance, and SOPs in order to safely care for Soldiers who are potentially COVID-positive.

In the event of a positive COVID test, leaders must also have plans in place for widespread testing of Soldiers throughout the unit. The FORSCOM standard is to test all close contacts (defined by the CDC as persons who are within six feet for fifteen or more minutes) with the COVID positive Soldier and if 15% are confirmed COVID-positive, then the next echelon higher is tested. For example, if two Soldiers in a 10-man squad tests positive, then the whole platoon must be tested. After testing the platoon, if eight of the 50 platoon members test positive, then the whole company must be tested. Leaders are responsible for also ensuring that contact tracing is conducted to ascertain whether COVID-positive Soldiers have been in close contact with others outside of their unit. For example, if a COVID-positive Soldier was recently on a detail with the unit's Field Feeding Section, it may be prudent to test the Field Feeding Section as well.

The combination of continued preventative measures; a standardized, decentralized screening process; and well-understood SOPs for evacuation, testing, quarantine, and isolation gives leaders the ability to train with confidence that COVID will not seriously impact their unit's readiness.

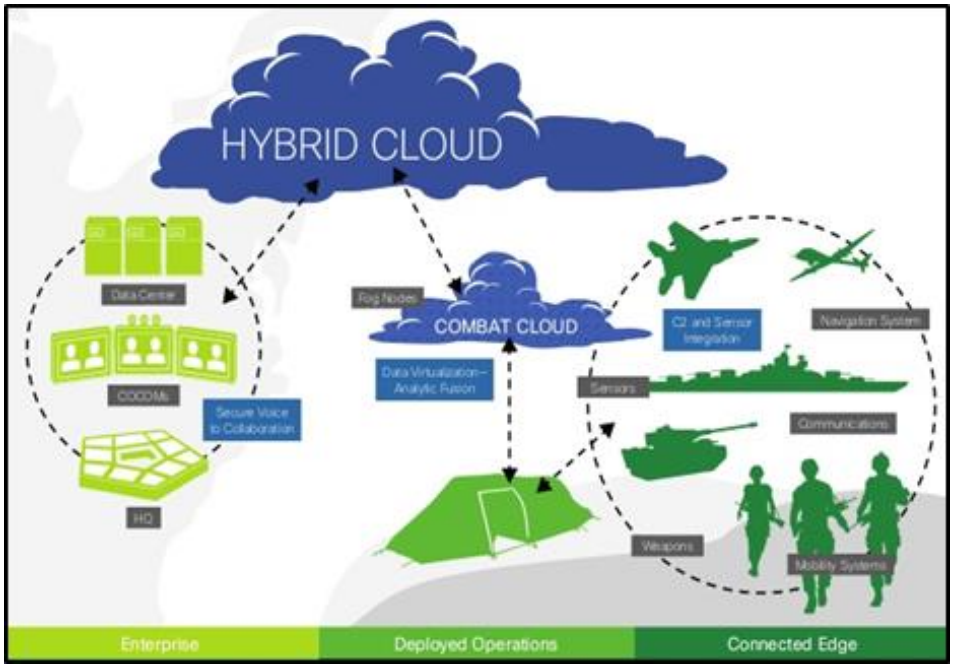
Although there are no specialized capabilities within the BCT with regard to COVID-19, this does not mean the formation is completely powerless to respond. The BCT can protect Soldiers and safely build unit readiness within COVID-19 constraints. The BCT's capacity to monitor the health of its personnel can be exponentially increased if the medical community trains non-medical personnel to conduct screening and temperature checks within subordinate formations. Leader engagement and prior planning simplifies the issue and creates "battle drills" that can be executed at the unit level. When applied as a concerted whole and with leader involvement, the unit can operate in the COVID-19 environment indefinitely, regardless of its location in garrison or in training.

Soldiers are taking precautions against COVID-19 in training and forward operating environments.
US Army photo

Building the knowledge, skill, and ability for the cloud-based data applications of the future

Maj. Ernest B. Jones
US Army Signal School

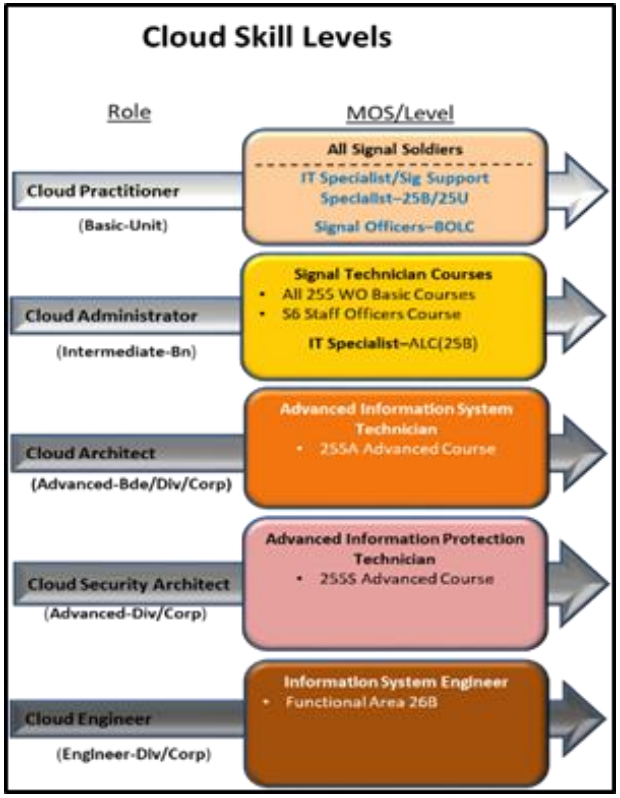
The future battlefield will demand the Army employs an integrated multi-domain force capable of agile combat operations at near real-time. Information is central to this future warfighting capability. Not just ones and zeros, but the ability to interpret uncorrelated data in a manner that enables Mission Command. This operational construct has been effectively referred to as the Combat Cloud by Military Strategist like USAF Retired Lt. Gen. David Deptula as early as 2016. It suggests that we can harvest data from various sensors and information systems. Each system can store and share data in a cloud infrastructure where near real-time data analytics allows dispersed data to be rapidly collated which supports operations from the Pentagon to the edge of the battlefield. Central to achieving this operational paradigm is a cloud-based information environment where integrated data management seamlessly connects Mission Command, Warfighting Functions and Combat Operations across multiple domains simultaneously.



Courtesy graphic

The Signal Corps is challenged with rapidly developing the skills associated with delivering cloud and data services to empower the next generation of Mission Command Information Systems (MCIS) like the Command Post Computing Environment (CPCE). CPCE is the central computing environment developed to support command posts and combat operations. The system is interoperable with mounted, mobile and handheld systems. When envisioning a MCIS like CPCE integrated in a cloud-based information environment supported with near real-time data analysis, it has the potential to enhance combat operations exponentially. There is a distinct connection between the cloud and data and it is important to train and develop these skills in the Signal Corps.

Some terms that you should be familiar with are the terms “Big Data” and “Cloud Computing”. “Big Data” usually refers to large sets of data while “Cloud Computing” refers to cloud-based services that process the data. Cloud-based services are becoming increasingly popular in variety of “As a service” offerings. Understanding cloud infrastructure best practices and the types of data



Courtesy graphic

that can be stored in large quantities is crucial. More importantly, it becomes essential for the Army's IT Workforce to possess the knowledge, skills and abilities to perform cloud and data tasks to support the MCIS requirements of the future.

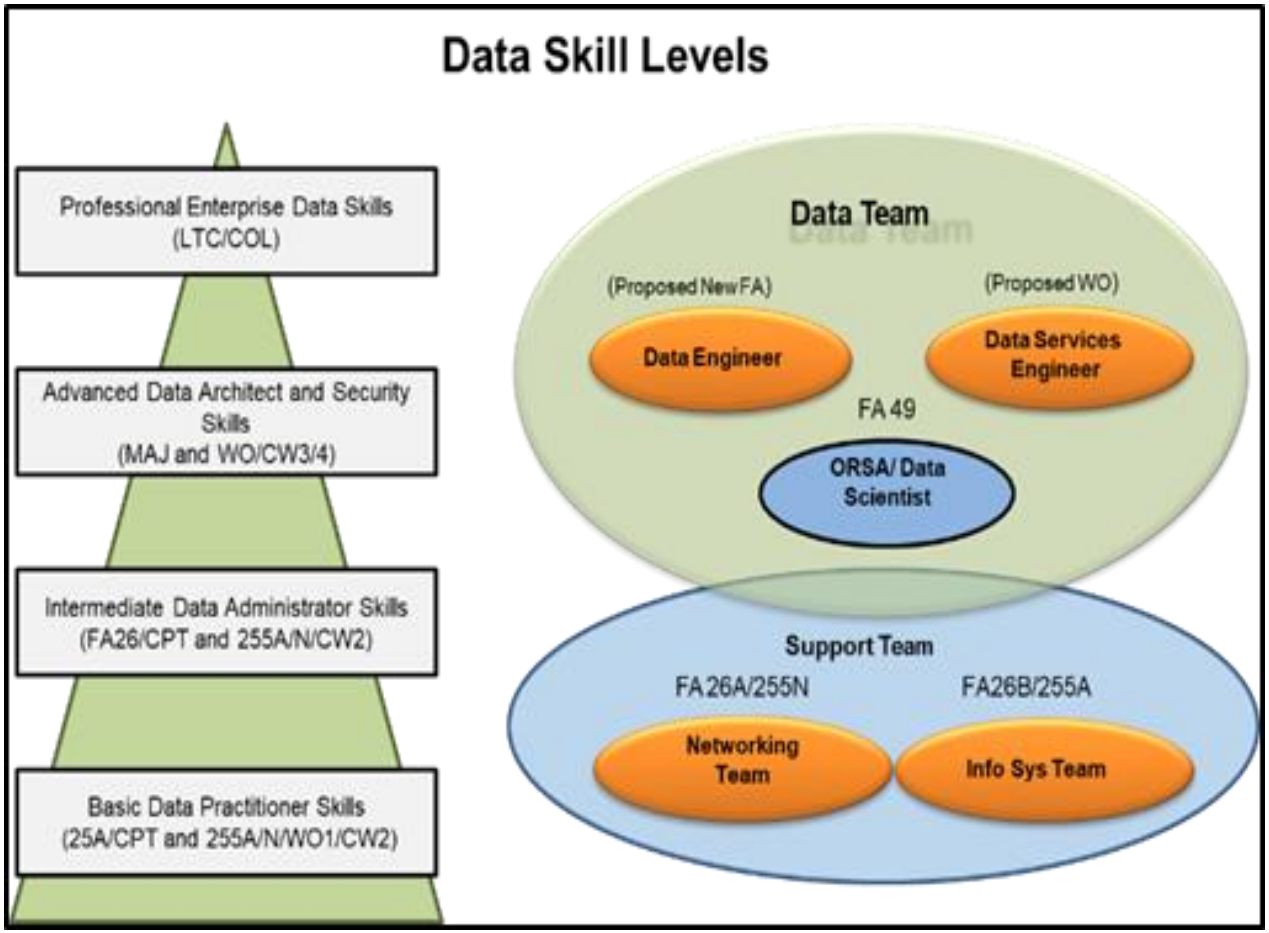
Using a cloud-based "As a service" model allows users to easily process data. Systems like CPCE have developed user interfaces which allows the operators and sensors to input data into the system. Cloud Computing infrastructure provides functional support in the form of database management, cloud-based virtual machines, storage containers, identity management, and machine learning capabilities. Each technology generates enormous amounts of data. The data is centrally stored in data warehouses or data lakes within the Cloud infrastructure. The aggregate result of this data is more commonly understood as "Big Data." Once the data is aggregated, it can be processed through Cloud Computing platforms and used in a variety of ways. For example, it can be tagged, queried, searched, edited, and used for future insights. Employing data analytic tools augmented by artificial intelligence allows for real-time processing of Big Data.

Training our Signal Soldiers on cloud and data requires two separate but supporting initiatives over the next three years. The US Army Signal School will employ a strategy from a holistic multi-tiered approach that focuses on roles and responsibilities by echelon. Each echelon will receive tailored training depending on the associated tasks at that level. Companies, Troops, and Batteries will have Cloud Practitioners responsible for basic cloud service oversight and consumption. Battalions will have Cloud Administrators responsible for local cloud configuration, management, and monitoring. Brigades, Divisions, and Corps will have Cloud Architects responsible for cloud tools, service design and configuration. Cloud Architects at the Division and Corps Level will also be augmented with a Cloud Security Architect and a Cloud Engineer. The Cloud Engineer is responsible for design, planning and management of the cloud infrastructure while the Cloud Security Architect secures the cloud infrastructure. Cloud skills will be incorporated into the current training for Signal Soldiers, NCOs, Warrant Officers and Officers currently perform information system and security functions using training products from the industry's top commercial cloud providers.

Training data skills will be more challenging within the Signal Corps. Although detailed analysis is onging, the initial data training will focus on the Signal Warrant Officers and Officers. More advanced data tasks may require a new Area of Concentration (AOC) for a Data specific Functional Area Officer. The training strategy will still attempt to align skills by roles within an echelon-focused approach by providing Signal Officers and Warrant Officers at the Battalion Basic Data Practitioner skills for Signal Officers and Warrant Officers at the Bat-

talion Level. Intermediate Data Administrator skills at the Brigade Level and Advance Data Architect skills at the Division and above. The Data Engineer and Data Services Engineer Skill sets will reside at Corps and above. The data function requires a collabrative effort where Signal Network and Information Systems technical leaders work with Functional Area 49, Operations Research/Systems Analysis (ORSA) and Data Engineers to create the seamlessly cloud-based information environment where data management and data analysis are integrated. This type of information environment will allow Commanders to radiply respond to developments on the battlefield as while they occur with full situational awareness of current combat capabilities and ongoing operations.

Imagine a future battle where various sensors connected and sharing data in a cloud-based infrastructure detect dispersed enemy activity. The activity could be both a physical and a virtual threat. Ongoing data analytic tools determine that these bits of data indicate that the adversary is on step three of five in establishing a weapons platform, while simultaneously sending position and location information to the Fire Support Officer (FSO). At about the same time the adversary completes step five and establishes the weapons platform. The FSO eliminates it all without deviating or impacting the current ongoing mission. This example indicates the power of a cloud-based information environment where integrated data management and analytics seamlessly and simultaneously connects Mission Command, Warfighting Functions and Combat Operations across multiple domains. The requirements are clear (multiple systems must interact, sharing information, and empower each other) and the technology already exists. Rapidly developing the skills associated with delivering cloud and data services to empower the next generation of Mission Command Information Systems is one challenge the Signal Corps will meet head on.



Courtesy graphic

Supporting the cloud and Big Data with Software Defined Networking

Maj. Michael D. McConkey
Office Chief of Signal

The Army Data Plan, published in November 2019, outlines the Army plan to better utilize institutional data to increase the speed of decision-making. The plan calls for data to be visible, accessible, understandable, trusted, interoperable, and secure (VAUTIS). While the Data Plan focuses on data and not communication networks, an improved network infrastructure will have to be in place to guarantee the strategy's six objectives. The Army has been making IT improvements that will help support the data initiative. Installations have increased bandwidth and a global cloud computing infrastructure is in the works. The Signal community may be able to use Software Defined Networking (SDN) to capitalize on these improvements to better support the Army's data goals.

SDN is a shift from the traditional routing and switching used in today's infrastructure. The current network is decentralized, complex, inflexible, and difficult to troubleshoot. Traditional routing protocols rely on each device in the network to make individual decisions on how to forward traffic. It also requires operators to program each piece of hardware when changes or corrections are required. SDN provides more flexibility by moving the decision functionality from individual routers to a centralized controller. A software defined network is centrally managed, providing a global view from end user to server, and can be programmed to function in ways that are not possible in traditional routing and switching protocols. Operators are able to make a single software change to change functionality across an entire enterprise. Commercial off the shelf products and open protocols exist that provide SDN on the local area network (LAN), wide area network (WAN), and in the data center. Utilizing SDN will posture the Army to support a hybrid-cloud en-

As part of the basic networking, before information is transmitted, it is broken up into smaller digital data packets. The network then chooses the best path, or route, to send each data packet and, once packets reach their destination, the network reassembles them. In a software-defined networking design, these two process planes are separated. The forwarding functions (the data plane) remain with the local network device, but the routing control functions (the control plane) are extracted, turned into more dynamic software, and centralized at a network operations facility, or in a campus network environment, where they can be managed collectively by experienced Signal Soldiers.
US Army photo

vironment and an infrastructure to support big data.

As the Army migrates services to a cloud environment, Signaleers will most likely be operating in a hybrid- and multi-cloud environment. Some legacy Army systems may take longer to migrate from traditional servers to the Army cloud environment. These legacy services will remain in a traditional Army data center or tactical stack and will have to coexist and interact with services hosted in the Army cloud. This is called a hybrid-cloud. Traditional servers at a traditional data center will have to integrate with services hosted in a commercial provided cloud. On top of that, the Army cloud may also include multiple cloud vendors. This is called multi-cloud. Using traditional routing and switching, Signaleers will have to maintain separate infrastructures for each data center location and each cloud vendor. This requires configuring multiple devices, configuring multiple policies, and securing multiple data centers. SDN can simplify hybrid - and multi-cloud environment and provide a better preforming, more secure infrastructure.

SDN can provide a single infrastructure, supporting legacy services in on-premise data centers and services hosted at multiple cloud vendors. It can provide a single pane of glass to monitor and configure the infrastructure supporting both legacy systems and cloud provided services. Commercial SDN vendors provide solutions to integrate with Amazon Web Services, Microsoft Azure, Google Cloud, and other commercial cloud providers. SDN controllers use the application programming interface (API) for commercial cloud providers to manage the cloud infrastructure. SDN can make on demand changes to optimize the network for specific applications and workloads. It also makes expanding the current infrastructure easy. Zero touch installations are possible. Installation is automated and policies are automatically applied when adding new switches to the infrastructure.

SDN also provides security advantages for the data center. Many SDN vendors provide a zero-trust infrastructure out of the box. All connections between services are implicitly denied. A policy must be in place allowing entities in the data center to communicate. Multiple data centers and cloud providers can also be configured as a single entity across the enterprise. It may lead to a simplified

The US Army Data Plan sets forth guiding principles to transform how the Army analyzes and utilizes data to enable data-driven decisions across its enterprise.
Photo by Staff Sgt. Zane Craig

The Army Data Plan, aligned to the Army Vision, sets forth guiding principles, goals and objectives, imperatives, and data management structures to transform how the Army manages, analyzes, and utilizes data to enable data-driven decisions across its enterprise, and with partners, through a resilient, secure hybrid cloud solution.
US Army graphic

accreditation process for data centers, reducing hardware and cost requirements for security.

There are ongoing efforts within the Army to use SDN in the data center. Ground Intelligence Support Agency (GISA), an INSCOM element supporting Army Top Secret networks and MI activities, are deploying Cisco's Application Centric Infrastructure (ACI) in their data centers across the globe. ACI is Cisco's SDN solution for data center and cloud infrastructures. GISA Pacific at Fort Shafter, HI is the first regional data center from INSCOM to move to Cisco's SDN solution. Mike Clancy, the Network Infrastructure Chief for GISA Pacific, can already see the advantages in automating changes and security SDN in the data center offers. Mike stated, "ACI has enabled GISA Pacific to quickly deploy Data Center policy out to the [Installation Processing Node], additionally it deploys in a Zero Trust model increasing security, and Service Injection makes Firewall deployments significantly easier by enabling and disabling the capability with the click of a button." GISA will see even more benefits from SDN once it deploys the infrastructure to their other regional data centers, extending a single infrastructure across the enterprise.

Data science applications require an infrastructure that supports the storage of large amounts of data as well as the transfer of large amounts of data. Data Analysts or the applications they use may not be co-located with the data being analyzed. If the data is stored at a data center far away or in a cloud environment, there is a requirement for a high performance network from end to end. This could be from a user or another system to the data storage hosted somewhere else. There are many factors that can impact the performance of the data transfer between two points, including bandwidth and hardware limitations. When the network becomes congested because of these factors, quality of service (QoS) rules are used to determine which data gets transferred the fastest. In traditional infrastructures, QoS is hard coded, not flexible, and depending on the service providers between the two points, may be limited. SDN can provide a better solution.

SDN can provide on demand changes to QoS, guaranteeing the best performing network for large data transfers. Commercial solutions exist that provide SDN for big data networks. The solutions provide on demand path reservations for data transfers that offer guaranteed bandwidth end-to-end. SDN provides much more control of network traffic than a traditional architecture can provide. Traditional infrastructures would require manual changes on every network device in the path the data.

There are many benefits of Software Defined Networking outside of data centers and big data and is the future of networking. SDN could provide several advantages in the support of the Army's big data and cloud initiatives. It could provide an infrastructure that's easier to maintain, easier to secure, and provide better performance. Commercial solutions are available today that the Army could use to support these efforts.

Changes to COMSEC training in FY21

Lt. Col. Jason Allen
Signal Leader Development College Director

Communications security (COMSEC) employs measures that are intended to deny adversarial attempts to extract information from telecommunication traffic. The Signal Corps uses COMSEC daily in garrison, field, and theater environments in order to protect the transmission of unclassified and classified information in support of military operations. With the dawn of the cyberspace domain our weapon systems, Mission Command Information Systems, and many data and voice networks are inextricable linked to telecommunications systems that require COMSEC for protection of the system of systems. In order to stay ahead of our adversaries to protect against vulnerabilities the Signal Corps has adopted a new Management Client (MGC) course that will begin in Fiscal Year 2021 (FY21). The course will train our Soldiers and DA Civilians to become fully qualified to manage our COMSEC accounts on the latest COMSEC policy and account management equipment.

The National Security Agency (NSA) began the modernization process of our nation's COMSEC accounts and infrastructure by replacing our legacy COMSEC equipment around 2015. Before 2015, the COMSEC accounts utilized the Local COMSEC Management Software (LCMS). The NSA procured the Management Client (MGC) as a replacement for LCMS. The introduction of the MGC into the Operational COMSEC accounts enabled equipment standardization and enhanced COMSEC systems synchronization, resulting in the achievement of Network-centric functionality at the national level.

The Signal Corps has modernized how we train our Soldiers on Key Management Infrastructure (KMI) Operating Account Managers (KOAM) on the newest COMSEC policy and account management equipment. In May 2019 the Signal School began developing a new MGC course that will combine the COMSEC Account Managers (CAM) course with the Management Client course while incorporating the most updated training needed.

Courtesy graphic

The legacy CAM course is a two week course that instructs students on all aspects of COMSEC policy. The legacy MGC course is a two week course that instructs students on the functions of the MGC. Beginning October 1, 2020 (FY21) the Signal School will combine the CAM and MGC courses into a new three-week MGC course. The new MGC course will fulfill the requirement in AR 380-40 to become a fully qualified KOAM. The course will maintain the same course number and title as the old MGC course.

Anyone who have completed both the CAM and MGC courses prior to October 1, 2020 will remain fully trained as a KOAM and will not be required to attend the new MGC course. After October 1, 2020 if a person has completed only one of the two required courses (CAM and MGC) then the new three-week MGC is required to be-

come fully qualified as a KOAM. The move to the new MGC course will go into effect beginning October 1, 2020 for all course locations to include Fort Gordon, Korea, Germany, and National Guard Professional Education Center (PEC).

The three-week course will correct several issues that most Major Commands (MACOMs) experienced. Under the legacy CAM and MGC courses construct this created unnecessary backlog of personnel needing to be trained in both courses to become a KOAM. In the past, not all students were able to become fully qualified in one fiscal year. On average, personnel assigned to a KOAM position were able to receive instruction in CAM but not MGC due to the limited number of seats in MGC course. This constraint proved far more problematic for the National Guard (NG) and the Army Reserve (AR). The new MGC will fix the backlog issue allowing students to receive all required training under one course. Additionally, the Army will be able to train 400 new KOAMs per year through the new MGC course in support of operational readiness.

The new MGC course will also alleviate scheduling conflicts with the legacy CAM and MGC courses. Currently, and in the past, it has been difficult for units to schedule a reservation for CAM and then immediately attend the MGC course due to seat availability and unit OPTEMPO. The new consolidated MGC will save units time and money while reducing turbulence in qualified KOAM population. The new course will reduce wait times, alleviate accounts from closing due to lack of trained personnel and overall will reduce expenditures in units TDY funds. The benefits on readiness and logistical cost have been the critical factors in driving the changes in the COMSEC training.

Any students attending the new MGC course will be instructed in both COMSEC policy and MGC functionality. Each student will be instructed on a policy lesson and then apply that lesson to the MGC. Within the new MGC course, it provides students with a deeper knowledge of the policy tied to functionality. The overarching course theme is to teach the student the "why" and then show them the "how" while injecting critical thinking throughout the course.

The intent of the new three-week MGC course is for the student to leave the course equipped with the knowledge, skills, and abilities on both COMSEC policy and MGC functionality to be equipped and fully qualified as a KOAM to manage a COMSEC account. Anyone interested in making a reservation for the new MGC beginning FY21 can do so using the Army Training Requirements and Resources System (ATRRS). If you have any additional questions in regards to these changes, please feel free to contact the COMSEC Branch at usarmy.gordon.signal-schl.mbx.comsec-branch@mail.mil or 706-791-5914.

COMSEC courses are led by the US Army Signal School on Fort Gordon, Ga.
US Army photo

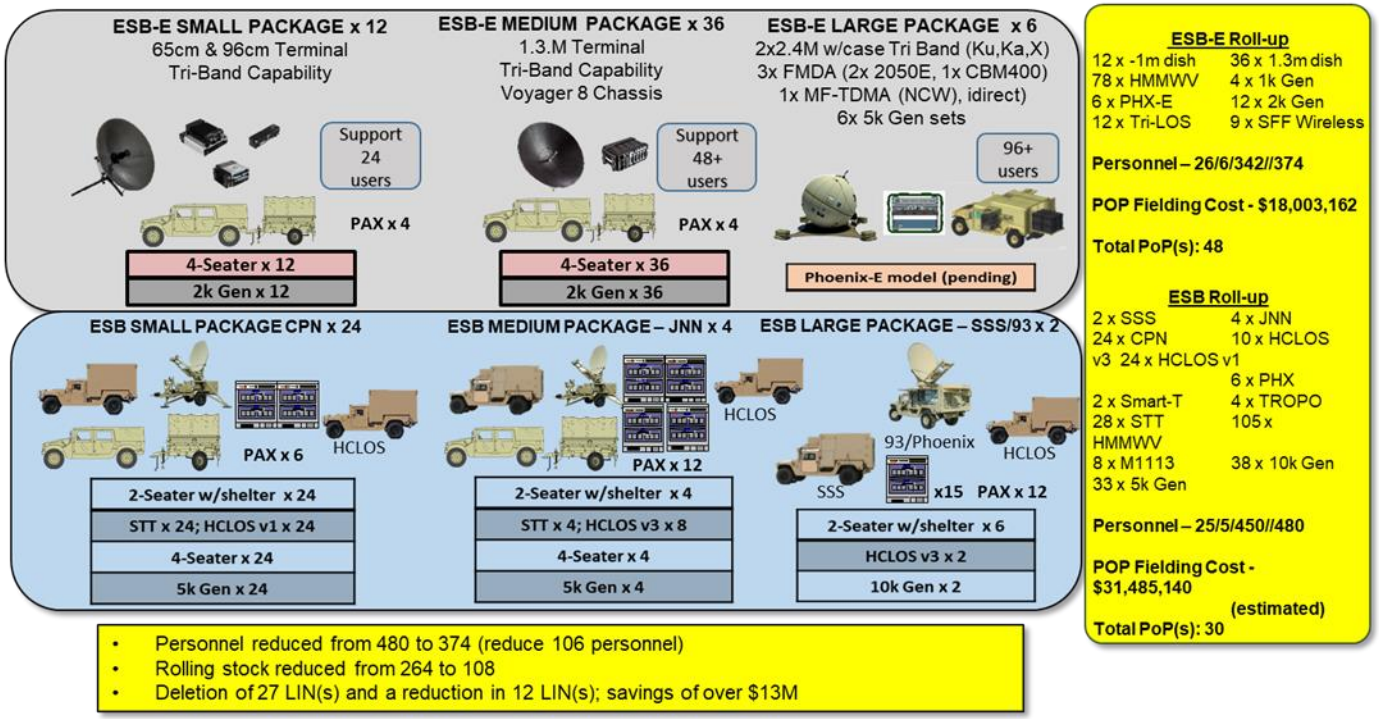
Update on Expeditionary Signal Battalion (Enhanced)

Lt. Col. Mallory A. Wampler
Commander, 50th Expeditionary Signal Battalion (Enhanced)

A previous Army Communicator installment, authored by Army Capabilities Manager Networks and Services, laid the foundational drivers thrusting our Signal Regiment to transform our formation. The previous article concluded the ESB (E) concept of scalable and tailorable expeditionary capabilities is essential to support warfighter needs today and in the future.

The 50th Expeditionary Signal Battalion, an element of the 35th Tactical Theater Signal Brigade (TTSB), was selected as the Army's prototype ESB (E). Over the last two years, the 50th tested, exercised and deployed multiple variants of light, rapidly deployable, scalable Commercial off the Shelf (COTS) signal antenna and baseband systems with great success. The transformation from ESB to ESB (E) resulted in the center of gravity being a four-person team that can quickly deploy its tailorable kit anywhere and provide immediate connectivity for warfighting commanders. The comparison can be seen in the figure below and a handful of the big takeaways follow.

The ESB (E) equipment, organizational structure and sustainment methodology are largely modeled after units outside of the conventional force. This allowed the battalion to centralize its signal maintenance and reset process focusing on improving mission lifecycle integration between operations and maintenance; increased cross-functional communication and coordination for knowledge transfer; the generation, use and treatment of authoritative data sources to inform signal system decision-making; consistent and reliable processes for signal systems; increase velocity on systems repair or spares replacement; verification and calibration of processes through expert input and external validation.



Graphic provided by Lt. Col. Mallory A. Wampler

50th ESB (E) Maintenance Soldiers Conducting RESET Operations.
Photos provided by Lt. Col. Mallory A. Wampler

The 50th ESB (E) placed a key emphasis on integrating Network Operations (NETOPS) with Communication and Electronics (C&E) hardware maintenance functions through a battalion-controlled reset process. Centrally locating NETOPS reset, signal communication exercise (COMMEX) training and ESB (E) team signal equipment storage in the motor pool paid dividends. Furthermore, since the ESB (E) MTOE assigns all maintenance personnel to the Headquarter and Headquarters Company (HHC), the battalion assigned a Maintenance Platoon Leader and Platoon Sergeant to further merge cross-functional communication and coordination activities across C&E, automotive maintenance and NETOPS.

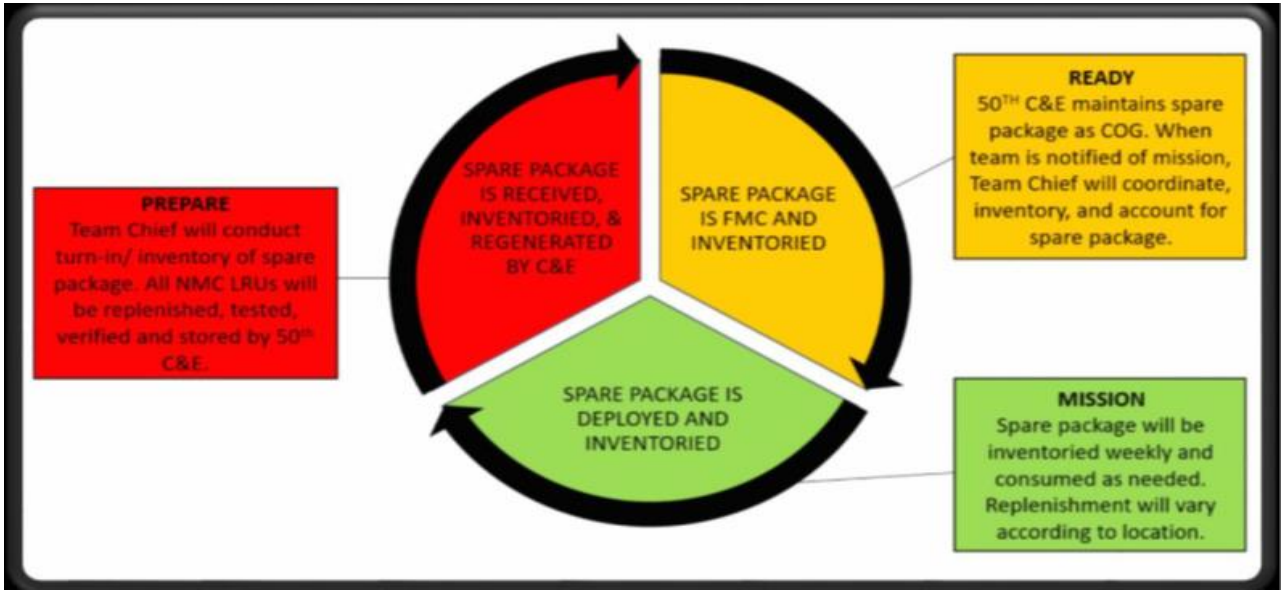
Operationally, the unit standard operating procedures (SOP) was updated to require ESB (E) equipment storage, pre-mission and post-mission communications exercises to be conducted in the motor pool. The intent was to facilitate knowledge transfer across teams, provide integrated access to NETOPS, C&E and motor maintenance support and to isolate teams preparing for mission from garrison operations. The tactical SOP (TACSOP) adjusts processes for live mission support through a combined C&E and NETOPS contact team composition that is scalable based on mission complexity and duration.

During the prototype period, 50th ESB (E) was comprised of equipment from multiple vendors, to include Tampa Microwave, PacStar, KLAS, DTEK, L3 Technologies and Honda. These vendors provided support to ensure systems remained fully functional throughout the prototype. To assist with maintenance risk reduction, all 50th ESB (E) C&E Soldiers attend the COTS New Equipment Training (NET) to better understand COTS system capabilities, common system failure symptoms and diagnosis best practices, vendor-specific processes and troubleshooting techniques for C&E support to signal teams. It is worth noting most of the COTS systems fielded do not allow for extensive C&E hardware troubleshooting at the unit level. 50th ESB (E) C&E personnel are focused primarily on identifying trends, diagnosing system hardware failures and increasing velocity on replacement components when evacuation to vendors through PEO C3T is required.

Asset visibility and property accountability are additional challenges when receiving diverse COTS end items and components from multiple vendors. The priority for the battalion was to ensure digital tracking and accountability through authoritative sources for systems not yet in the Army inventory. The 50th ESB (E) added systems to GCSS-A under a Non-standard LIN using modem serial numbers to track complete signal system and end-items. This enabled the unit to see equipment on our property books and allows for digital sub-hand receipting of the systems to team level and below. The battalion also tracks the systems on the GCSS -A Equipment Status Report (ESR) and in the Unit Status Report (USR).

The Battalion's C&E shop centrally manages all ESB (E) spares. Spares, like team equipment, go through the prepare (red), ready (amber) and deploy (green) cycles. Red phase spares are stored at the C&E shop and validated for functionality, firmware updates or patches as prescribed by the vendor. These tasks are tracked as services in GCSS-A as a means to monitor completion. For equipment identified as damaged or out of tolerance, the C&E Shop is responsible to work order and coordinate with PEO C3T's Satellite Maintenance Center for exchange or repair. Once FMC, spares are stored in C&E Shop Stock, which is centrally managed and inventoried by an assigned 92A. As signal teams plan missions, C&E works closely with the commander and S3 shop to ensure support is prioritized by mission type and duration. If a complete spares package is required, a team chief or C&E representative will sign for it to provide onsite support as part of a Cross-functional NETOPS-C&E contact support team.

This process facilitates a comprehensive approach to ESB-E COTS spares management and validates that spares kits are FMC upon distribution. More importantly, it reduces risk to mission by verifying spares issuance decisions are based on lessons learned from across the organization, historical data or trends, total inventory available, and mission sensitivity or priority. Accordingly, cross-functional NETOPS-C&E contact teams are assigned based on operational environment and mission requirements. This has helped to improve efficiency and asset visibility on PM spares initially issued to ESCs through hard-copy hand receipts.



50th ESB (E) Spares Management Process
Graphic provided by Lt. Col. Mallory A. Wampler

Throughout 2018 and 2019, 50th ESB (E) was afforded the opportunity to test/prove the new kit in several local support missions on Fort Bragg, North Carolina, numerous exercises around the globe and ultimately deploy teams to CENTCOM and Washington DC in support of the Immediate Response Force (IRF) in 2020. The feedback from the operators and the supported commanders are positive and game-changers for the future signal fight.

50th ESB (E) will pure fleet 48 nodes in October 2020. The nodes are a combination of KLAS and L3. The center of gravity remains the four-person team.

The battalion continues to maintain IRF readiness while supporting Warfighter 20-1, JRTC mission, local support missions, the Network Cross Function Team Project Convergence testing, as well as experimenting with TANIUM, ANCIBLE, NETBRAIN and CODEMETTLE.

Death of a "Screaming Eagle": First Lieutenant John E. Darling, Jr. and the battle for Fire Support Base Ripcord

Steven J. Rauch
Signal Historian

Fifty years ago on July 23, 1970 soldiers of the 101st Airborne Division evacuated from and abandoned the hill known as Fire Support Base (FSB) *Ripcord* located about 25 miles west of Hue in South Vietnam. After almost five months of continuous fighting on and around *Ripcord*, two of the final casualties from the 2/506th Infantry battalion that day were Lt. Col. Andre C. Lucas, the battalion commander, and the battalion operations officer, Maj. Kenneth P. Tanner, both killed by an enemy mortar round while supervising the final evacuation of men from the base. Their deaths added to the total of 112 men killed and 698 men wounded from the 101st from March 13 to July 23, 1970 during *Operation Texas Star,* a series of search and destroy missions east of the A Shau Valley in the Thua Thien Province of South Vietnam. During that period ground and aviation units of the "Screaming Eagles" were subjected to heavy rocket, mortar and ground attacks by the People's Army North Vietnam (PAVN). Many 101st soldiers compared the battle for *Ripcord* to that of *Hamburger Hill* fought a year earlier by some of the same units and concluded that *Ripcord* was more wasteful the Army deliberately failed to apply the full effort needed in order to avoid too many casualties and another public relations debacle.

The battle of FSB *Ripcord* was the last major division level fight of the US Army during the Vietnam War and its legacy, both at the time and fifty years later, has been overshadowed by other nota-

1st Lt. John E. Darling, S-6 2/506 Inf. 101st AB 1969-1970
Courtesy photo

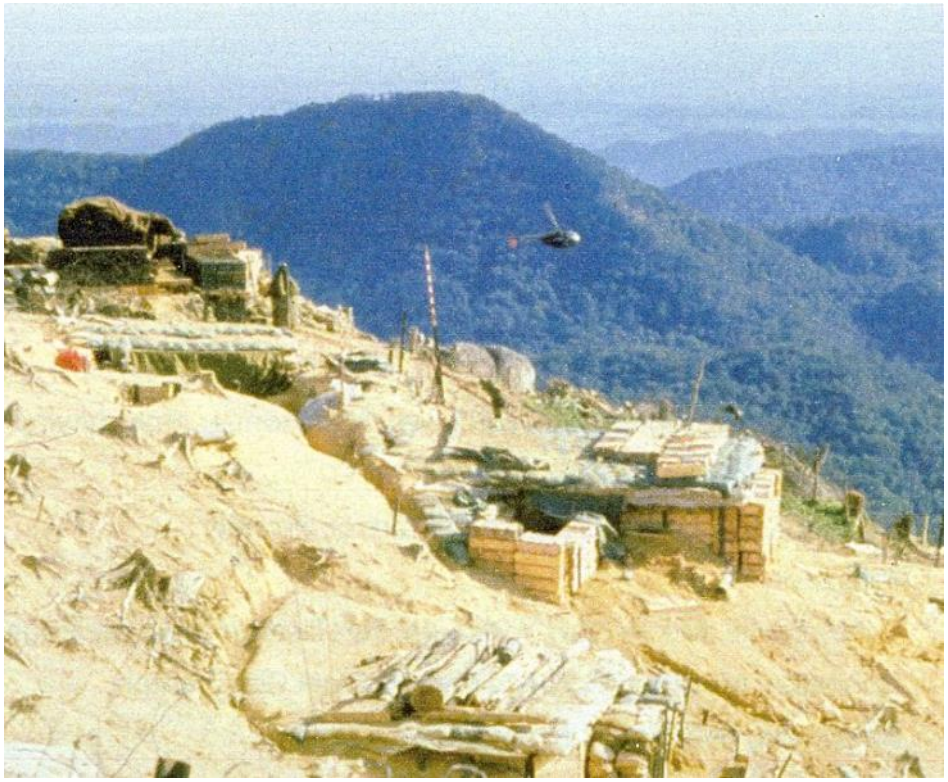
ble events of that crucial year. President Richard M. Nixon had ordered significant troop withdrawals during 1970 which significantly changed the mindset of soldiers and the US public about the war. In addition, the controversial invasion of Cambodia in May 1970 led to massive demonstrations at home, to include the deadly protest at Kent State University that month. Thus the public was distracted from the deadly battle the 101st was fighting at the time. Among those who lost their lives in the battle for *Ripcord* were 1st Lt. Bob Kalsu, a field artillery officer who had been an All-American lineman at Oklahoma and was a member of the Buffalo Bills offensive line; Pvt. 1st Class Weiland C. Norris, an infantryman and the younger brother of actor/martial artist Chuck Norris; and 1st Lt. John E. Darling, Jr. the battalion communications officer for the 2/506th Infantry.

John Edward Darling, Jr. was born in Fremont Michigan, notable as the home of Gerber baby foods, on October 17, 1946 to John and Connie Darling. During High School he was a member of the National Honor Society, varsity football captain, varsity wrestling captain, and a Boy Scout who served as a camp counselor at the Gerber Scout Camp. Darling later became an Eagle Scout and graduated with honors from Fremont High School in 1964. He received an appointment to the US Military Academy and was remembered by his roommate John C. Cruden as, “a natural leader: an individual gifted with those traits that attract other people to him.”

Darling graduated from West Point on June 5, 1968 and was commissioned into the Signal Corps. He attended Ranger School, the Signal Officer’s Basic Course at Fort Gordon, the Battalion Communications Officer Course at Fort Sill and finally Airborne School. During that time he married Catherine Butler of Fremont on December 28, 1968. After his training was completed, he was assigned to the 82nd Airborne Division at Fort Bragg but soon deployed to Vietnam on October 12, 1969. He was assigned to the Headquarters and Headquarters Company, 2/506th Infantry as the battalion communications officer, the equivalent of a battalion S-6 today.

The doctrine of using fire support bases to support US ground operations had fully matured by 1970. An FSB was designed and constructed to provide a secure location for artillery support to ground forces. These bases were usually in remote locations and relied on helicopters to emplace, resupply and displace the guns as needed. Fire support bases also served as command and control centers, assembly points, and landing zones. FSBs were usually established via air assault onto a

105mm Howitzers on Ripcord - 1970
Signal History photo



FSB Ripcord, 1970
Courtesy photo

hilltop or mountain and therefore required a large area to accommodate a landing zone. The site also had to be defensible against enemy infantry assault. Engineers would level the ground, clear vegetation for fire zones and help construct trenches, bunkers and berms to protect the artillery guns as well as the infantry defending the base. As might be expected a fire support base made for a tempting, but usually impregnable target, for an enemy ground attack but could still be hit with indirect fires, such as mortars and artillery.

As part of *Operation Texas Star* a string of fire support bases were established east of the A Shau Valley in order to prevent enemy movement into the coastal regions of Quang Tri and Thuan Thien Provinces. However, due to large concentrations of PAVN troops in the area, the establishment of the FSBs was heavily contested. The 2/506th Infantry from the 3rd Brigade was given the mission of establishing FSB *Ripcord* in March 1970 to facilitate the division's summer offensive against the 803rd and 29th PAVN regiments in the area. Supporting bases were also opened at FSBs *Bradley* and *Airborne* for 105mm howitzers.

Inclement weather delayed the initial attempt by Company A, 2/506th infantry to establish the base until March 12 and then was met by heavy enemy resistance. Poor weather continued to hinder operations until April 1 when Company B, 2/506 conducted a combat assault onto *Ripcord* along with the battalion jump TOC (tactical operations center), that included the battalion executive officer, Maj. Laurence J. Law, as well as the battalion S-6, 1st Lt. John Darling. Peter McSwain a Signalman in the commo section remembered, "Lt. John Darling came to me and said, Mac get your hard hat, your flak jacket, rifle and some ammo and go to the helicopter pad. A bunch of us went there, took off and landed on a hill that was all cratered and de-vegetated." The soldiers immediately received intense small arms, mortar and recoilless rifle fire from the PAVN 803rd regiment. McSwain later recalled, "As soon as I got a few yards from the Chinook, Lt. Darling yelled at me to jump into a shell crater. They told me were getting mortar fire."

The jump TOC was positioned near some large man-high boulders from where Law could coordinate aircraft support to include medivacs. The PAVN had pre-plotted mortar strikes one of which hit the large boulder sheltering the jump TOC and severely wounded Law in his back. Darling immediately took charge of the situation and moved the radios and surviving operators into a shell hole. He then carried a wounded soldier to a medi-

cal evacuation helicopter while under intense enemy fire. Darling then returned to the command post and directed helicopter gunship fire upon enemy positions. US casualties for that day were 21 wounded and 7 killed in action. Unknown to him at the time, Darling would be awarded the Silver Star on September 20, 1970 for gallantry in action. The citation stated in part:

> "His actions under fire enabled the prompt evacuation of casualties and forced the withdrawal of the hostile force. Lieutenant Darling's personal bravery and devotion to duty were in keeping with the highest traditions of the military service and reflect great credit upon himself, his unit, and the United States Army."

Ripcord was abandoned later in the day but on April 10 the 2/506 returned and without much opposition was able to establish the fire support base. From April through June, the battalion continued construction and conducted security operations around the area as the 101st continued to prepare for an offensive into the A Shau valley. During this time other events took place that diverted attention from that remote hill. On April 20, 1970 President Nixon announced his pledge to withdraw 150,000 more troops from South Vietnam during the next twelve months. That announcement was followed by an even more dramatic event on May 1, 1970 when US and South Vietnamese army forces began a series of search and destroy missions into Cambodia to find, seize or destroy supplies that the PAVN had stockpiled across the Cambodia-South Vietnam border. The invasion appeared to many American's as an expansion of the war instead of a contraction, and the news lead to massive anti-war protests throughout the US. During one of those demonstrations on May 4, 1970 four students were killed at Kent State University when Ohio National Guard troops shot into a crowd of the anti-war protesters.

Display of John E. Darling's service and awards, main lobby Darling Hall
Signal History photo

Back at Ripcord, a new battalion executive officer had arrived, Major Sidney Davis who directed the men to dig defensive positions, install a 50 meter wide perimeter of barbed wire as well as numerous land and claymore mines. The battalion TOC was built on the eastern slope near the top of the hill. Two steel conexes were placed end to end to form the TOC and a helipad was built above and in front of it. Members of the

HHC and battalion staff worked around the clock to improve the position with sandbags. Among those conducting that work included Darling and his signalmen. Later a separate communications center would be built in another conexe as the need for communications grew from the squad level up to tactical and strategic aircraft to support the mission. The base was home to a battery of 105mm howitzers and a battery of 155mm howitzers along with all the required ammunition and powder needed to provide fire support. It was imperative that the base defenses be impregnable to enemy ground attack and they were, leading some soldiers to refer to the base as Cheeseburger Hill.

In the midst of the base development, on May 18, 1970, Darling boarded a UH-1 helicopter flown by C Company, 158th Aviation Battalion that was on a resupply mission at *Ripcord*. He and Sergeant Harry J. Stone hitched a ride so they could take a new radio to A Company back at Camp Evans and then Darling was supposed to begin his R&R leave the next day. However during the flight, the UH-1 was hit by enemy ground fire and though the pilot attempted to make a forced landing, the aircraft crashed and rolled down a steep hill and out of sight due to the thick jungle canopy. Three crewman were killed along with Darling and Stone. The crew chief managed to jump from the UH-1 prior to the crash and was found at 1400 hours the next day. Not knowing the exact whereabouts of the aircraft, an aerial rifle platoon from B Troop, 2-17 Cavalry was inserted to conduct a search on May 19 but was not able to find the UH-1 due to nightfall. It was not until May 31 that the aircraft was located and the bodies, including Darling, were recovered. On June 2, 1970 the Army declared 23 year old John Darling to have been killed in action.

Plaque Dedicated in 1994 naming Darling Hall. Signal History photo

Darling's life had an impact on those who knew him then and long after the battle. The battalion chaplain's assistant Rick Blythe wrote about his experiences at Ripcord and in a letter home on May 25, 1970, he included the comment, "Our Communications Officer was found. His chopper was all shot up. Only the crew chief survived. He's in a state of shock. Lt. Darling was well liked by everyone." One of Darling's signal soldiers, Ernie Claxon said, "We called him the Duke. He acted like John Wayne. He was a good man, straight-up honest good guy. He led by leading. Another soldier in the HHC remembered, "Darling was a soldier's soldier. He was an Airborne Ranger, he was a West Point graduate. I thought he was an outstanding officer and soldier."

On July 1 *Ripcord* came under sustained heavy attack from mortars and recoilless rifles from the PAVN 803rd regiment. During the night of July 2, the base was attacked again with RPGs, small arms fire and satchel charges by an estimated 8 regiments of PAVN 324B division. On July 18, the PAVN succeeded in shooting down a CH-47 Chinook which crashed into the artillery ammunition storage area on *Ripcord*. The resulting explosion ignited the artillery ammunition and destroyed the aircraft, six M102 105mm howitzers and 2,238 rounds of 105mm ammunition. The next day the PAVN attacked the base again with mortar fire

and the 2/506 sustained 11 more wounded. At that point the leadership of the 101st, who were under intense pressure from senior military and political leadership to minimize friendly casualties in the face of major troop withdrawals, decided the image of another US base under siege in the media was something to be avoided. Ripcord was becoming a liability but to give it up was difficult for the division leadership who had the legacy of the "Screaming Eagle's" defiance at Bastogne hanging over their head. In the end the decision was made that holding *Ripcord* did not justify further casualties for little military advantage. Orders were issued to abandon the base and the evacuation was completed on July 23. Once all friendly personnel had been removed, B-52 bombers were sent in to obliterate anything remaining on *Ripcord*.

Darling Hall, Fort Gordon, Ga.
Courtesy photo

Though he did not serve very long as the battalion S-6 for the 2/506th Infantry or at *Ripcord*, John Darling should be remembered if for nothing else April 1, 1970 when he assumed command of an infantry battalion jump TOC, worked to save the lives of his fellow soldiers and direct firepower against the attacking enemy. 1st Lt. John E. Darling, the battalion S-6, made a difference through his leadership in the midst of chaos and applied all of the training he had accumulated during that one day on an obscure hill in Vietnam. His untimely death on May 18, 1970 ended his physical presence but not his memory. Those who knew him remembered him as friendly, likable and just an all-around great guy in addition to being a skilled Signal officer. Darling was also posthumously awarded a Bronze Star medal and Purple Heart in addition to the Silver Star.

On July 8, 1994 Maj. Gen. Robert E. Gray, the 27th Chief of Signal dedicated the new soldier support center and garrison headquarters Building 33720 as Darling Hall, in honor of Darling. Gray presented the Signal Corps Regimental Association Silver Order of Mercury to his widow, Cathy Darling Heuser. The building cost $7.6 million dollars and was to serve as the center for all soldier personnel needs. Since that time, every soldier who has attended training at the Signal School has passed through the doors of Darling Hall where John Darling's photos, medals and Silver Star citation are prominently displayed in the lobby to serve as inspiration for Signal soldiers in the 21st century.

In the next

ARMY COMMUNICATOR

S-6 in Action